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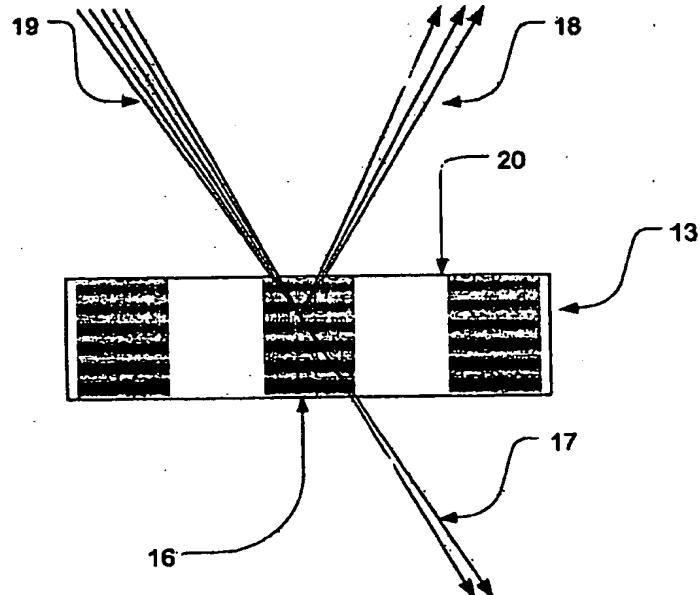
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(54) Title: **OPTICAL DATA CARRIER SYSTEM**



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(57) Abstract: The present invention provides a method of holographically storing data as in a series of grating structures including  $m$ -level coded elements in an optical data carrier, wherein  $m \geq 2$ , the method comprising: forming a grating sampling function as a direct sum of  $N$  partial grating sampling functions, each partial grating sampling function having a phase ( $\phi_n$ ) and amplitude ( $d_n$ ), wherein each  $d_n$  has  $m$  possible values.